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ABSTRACT

This report summarizes the results of an exploratory study of the relationship between parents' educational expectations for their children, the children's perceptions of these expectations, and student outcomes. Of particular interest were the congruence between parental expectations and the children's perceptions of these expectations and the impact of this congruence on student achievement and attitudes toward school. The data for the present study came from an earlier investigation designed to determine the dependability of the Project LONGSTEP questionnaire responses. Students represented a 2% stratified random sample (by grade within each school) of the students participating in Project LONGSTEP during the 1971-72 school year. It appeared that parental expectations concerning both how far in school they wanted their children to go and how good a student they wanted their children to be can influence student attitudes toward school; however, such expectations did not appear to influence student achievement test performance. In the case of how far in school they wanted their children to go, no special effort may be needed to communicate these expectations. On the other hand, it appeared that parents with high expectations concerning how good a student they want their children to be would be well advised to make a special effort to communicate these expectations to their children. "Data Collection Instruments and Guidelines" developed for Project LONGSTEP referenced in Vol. I, Chapter II, Section C, will be accessioned TM 005 987 in RIEMAY77. (RC)

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# PARENTAL EDUCATIONAL EXPECTATIONS AND THEIR IMPACT ON STUDENT OUTCOMES

Project LONGSTEP Memorandum Report

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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# PARENTAL EDUCATIONAL EXPECTATIONS AND THEIR IMPACT ON STUDENT OUTCOMES

PROJECT LONGSTEP MEMORANDUM REPORT

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## ABSTRACT

This report summarizes the results of an exploratory study of the relationship between parental educational expectations for their children, the children's perceptions of these expectations, and student outcomes. Of particular interest were the congruence between parental expectations and the children's perceptions of these expectations, and the impact of this congruence on student achievement and attitudes toward school.

The data for the present study came from an earlier investigation designed to determine the dependability of the Project LONGSTEP questionnaire responses. Students represented a 2% stratified random sample (by grade within each school) of the students participating in Project LONGSTEP during the 1971-72 school year.

The results of the present study suggest that:

- Parental expectations (as perceived by their children) concerning how far in school they want their children to go and how good a student they want their children to be were both positively related to children's general attitudes toward school, but not related to children's achievement test performance, during the subsequent year.
- Parental expectations (as reported by parents) concerning how far in school they want their children to go showed a positive relationship to children's attitudes toward school, regardless of how accurately children perceived these expectations.
- Parental educational expectations concerning how good a student they want their child to be were positively related to children's attitudes toward school in those cases where parental expectations and children's perceptions were in close agreement. Where there was very low agreement between parental expectations for How Good a Student and children's perceptions of these expectations, there was a negative relationship between the parents' expectations

and their children's school-related attitudes. With moderate agreement between parental expectations and student perceptions, student attitudes toward school were not related to parental expectations.

- Children appear to be more accurate in estimating how far in school their parents want them to go than in estimating how good a student their parents want them to be.
- From a practical standpoint, parents with high expectations concerning how good a student they want their children to be would be well advised to make a special effort to communicate these expectations to their children. From a research standpoint, the degree of congruence between parental expectations and children's perceptions of how good a student their parents want them to be may be a worthwhile variable to consider for future studies of school-related attitudes.

# PARENTAL EDUCATIONAL EXPECTATIONS AND THEIR IMPACT ON STUDENT OUTCOMES

## Introduction to Project LONGSTEP

This memorandum report is one of a series of reports developed under Project LONGSTEP, the Longitudinal Study of Educational Practices. The objectives of Project LONGSTEP were to design a system to study the characteristics underlying innovative educational approaches; to establish a large-scale data base of program characteristics and student outcomes for a select sample of educational programs involving intensive and highly innovative education practices; to determine longitudinally the impact of such innovation upon student performance and attitudes; and to attempt to identify the dimensions of the components that exhibited the greatest impact on student outcomes.

A full description of the project design, data collection procedures, analysis methods, and overall findings is contained in the several volumes of the project final report (Coles, Chalupsky, Everett, Shaycoft, Rodabaugh and Danoff, 1976; Coles and Chalupsky, 1976a, 1976b).

Although Project LONGSTEP was designed primarily to study the impact of highly intensive educational innovation on student achievement and attitudes, the vast amount of data gathered by the project during its three years of data collection can also be analyzed to provide answers to other important issues in contemporary education. The analyses documented in this memorandum report represent such a "specialized" use of a portion of the Project LONGSTEP data base.

## Objectives and Background of This Report

The overall objective of the analyses conducted for this report was to study the relationship between parental educational expectations (for his/her child), the child's perception of these expectations, and student educational outcomes. Of particular interest were the congruence between the parent's expectation and the child's perception of that expectation,

and the impact of this congruence on student achievement and attitudes toward school. The stimulus for these analyses was an earlier study of the dependability of Project LONGSTEP questionnaire data. The findings of this previous study indicated that for factual items, such as those contained in our scale of socioeconomic status, an acceptable level of dependability was present. On the other hand, there were several items involving subjective assessment of parental expectation where parents' responses differed greatly from those of their children. These results prompted the speculation that the agreement between parental expectations and children's perceptions of such expectations might be a worthwile variable for future studies of student outcomes.

A complete listing of the variables analyzed will be presented later. By way of introduction, however, the specific parental expectations explored here were assessed by two questions:

- How far in school do you want this child to go?
- How good a student do you want this child to be?

A number of previous studies have investigated students' perceptions of what parents expect of them in terms of school performance. As noted by Dyer (1972), the Equality of Educational Opportunity Survey (Coleman, Campbell, Hobson, McPartland, Moore, Weinfeld and York, 1966) found that students' perceptions of what their parents expect of them in school had a sizable correlation with test performance, at least for certain groups. Concerning the impact of parental expectations on student attitudes, Mayeske and his associates in their reanalysis of the Coleman data (Mayeske, Okada and Beaton, 1973) found that students' perceptions of Expectations for Excellence (on the part of their parents and teachers), together with Study Habits, played a major role in shaping student Attitudes toward Life. Other investigators have also explored the importance of students' perceptions of their parents' concern (Sewell and Shah, 1968). However, by and large, these studies have dealt exclusively with students' perceptions and have not measured parents' actual concerns.

The present study, while admittedly exploratory in nature, reflects an attempt to encompass both the educational expectations reported by

parents for their children as well as the students' perceptions of these expectations. The underlying hypothesis of this study is that the degree of congruence between parental expectations and the child's perception of these expectations provides valuable information concerning the dynamics underlying student cognitive achievement and school-related attitudes.

## Study Design and Methods

The analyses implemented for this report were designed in response to specific questions asked of the data and were intended to be descriptive and exploratory rather than confirmatory in nature. These questions and issues are reviewed next, along with the specific methods utilized to answer them. It should be noted that this section does not contain a detailed description of the study design of either Project LONGSTEP or of the verification substudy in which information on parental expectations was gathered. A more complete discussion of such issues is contained in Volume I of the final report and in the Volume I Supporting Appendices (Coles, et al., 1976). However, except with respect to the details of data collection and the scaling of analysis variables, this report does not assume that the reader has an in-depth familiarity with these previous project reports.

### 1. What was the nature of the sample of Project LONGSTEP students included in these analyses?

As noted previously, the data on parental expectations on which this report is based came from a verification study that was conducted during the second data collection year of Project LONGSTEP (1971-72). A summary of this study is contained in Volume I of the LONGSTEP final report (Coles, et al., 1976). The prime purpose of this supporting study was to gauge the dependability of our questionnaire data. Students chosen for the verification study represented a 2% stratified random sample (by grade within each school) of the students participating in Project LONGSTEP during the 1971-72 school year. While the verification study covered students in grades 1 through 11, the parent/student congruence analyses reported here included only those students in the verification study sample who were in grades 3 through 11 in 1971-72. Students in grades 1 and 2 were excluded because

the student questionnaires pertaining to them were completed by their teachers, and therefore did not contain a measure of the students' own perceptions of the educational expectations their parents had for them.

A profile of the analysis sample was then produced by means of frequency distributions of categorical descriptive variables (e.g., ethnic group membership, sex, grade, and socioeconomic status group).

2. What were the analysis variables of primary interest and how were they scaled?

Table 1 shows the variables that were of major interest in the analyses discussed in this report. Two of the indices noted in this table were analyzed as outcome or dependent variables--the CTBS Battery Total and the Composite Attitude index. These two particular outcomes were selected because the analyses implemented for this report were designed to explore the impact of expectations, perceptions of expectations and parent/student congruence on achievement and school-related attitudes in general. The CTBS Battery Total is a composite test score that is based on the three major content areas assessed by the CTBS--Reading, Language and Arithmetic. As such, it can be viewed as a general measure of student achievement. The CTBS pretest and posttest scores were standardized by grade separately so that subsequent analyses could be based upon all students, regardless of grade level (i.e., analyses were not to be stratified by grade).

The Composite Attitude measure was computed by averaging four more specific attitudinal items. This was done, not only because a general measure of school-related attitudes was desired, but because such a composite would undoubtedly be more reliable than any one of the indices upon which it was based.

3. How were achievement, attitudes, parental expectations, student perceptions, parent/student congruence, grade level, SES, sex, and ethnic group membership interrelated?

Interrelationships among all primary analysis variables were expressed in terms of correlations. Pearson r's in which one variable is continuous and the other is binary (e.g., sex and ethnic group membership) are point-biserial correlations. A Pearson r between two binary-coded variables is,

TABLE 1

Analysis Variables of Primary Interest

| Variable | Scaling |
|---|---|
| CTBS Battery Total Score (Spring 1971 and Spring 1972) | CTBS Battery Total Expanded Scale Score standardized to mean = 100.00 and standard deviation = 10.0 separately for each grade. |
| Student Socioeconomic Status | The arithmetic mean of the three possible SES scales that were developed from the student questionnaires administered each year during the study's three years of data collection. |
| Socioeconomic Status Group | So that identifiable groups of students at different SES levels could be described, student socioeconomic status was recoded into low, middle and high. SES scores less than or equal to minus one standard deviation from the overall SES mean were defined as low and assigned a scale score of 1.0; scores falling between minus one and plus one standard deviation from the overall mean became a middle SES group and received a scale score of 2.0; SES scores equal to or greater than one standard deviation above the overall SES mean defined the high SES group and were coded as a 3.0. |
| Composite Attitude* (Spring 1971 and Spring 1972) | Equal to the arithmetic mean of the non-blank scales, Attitude toward School, Attitude toward Language Arts, Reading Interest, and Attitude toward Math (see Volume I for a discussion of these scales). |
| Parent Expectations - How Far in School | How far in school do you want this child to go?<br>1 - Don't care<br>2 - Finish high school<br>3 - Attend junior college, business or technical school for 1 or 2 years<br>4 - Graduate from a four-year college<br>5** Professional or graduate school after college |

(continued)

*Intercorrelations among the items comprising this index are shown in Appendix A, Tables A-1 and A-2. Cronbach's coefficient alpha, an internal consistency measure of reliability, was .66 and .67 for the 1971 and 1972 Composite Attitude indices, respectively.

**Recoded to a value of 4 if child was in a grade from 3 to 8.

TABLE 1 (continued)

| Variable | Scaling |
|---|---|
| Student Perception - How Far in School | How far in school do you think your parents want you to go?<br>1 - They don't care<br>2 - Finish high school<br>3 - Attend junior college, business or technical school for 1 or 2 years<br>4 - Graduate from a four-year college<br>5 - Professional or graduate school after college (included only for students in grades 9-11) |
| Congruence - How Far in School | Equal to 5 minus the absolute value of the difference between the parent expectation and the student perception.* |
| Parent Expectation - How Good a Student | How good a student do you want this child to be?<br>4 - One of the best<br>3 - Above average<br>2 - About average<br>1 - Don't care |
| Student Perception - How Good a Student | How good a student do you think your parents want you to be?<br>4 - One of the best<br>3 - Above average<br>2 - About average<br>1 - They don't care |
| Congruence - How Good a Student | Equal to 4 minus the absolute value of the difference between the parent expectation and the student perception. |
| Ethnic Group Membership | Other than white coded as 1; and white coded as 2. |
| Sex | Boys coded as 1; and girls coded as 2. |

* The maximum congruence score for students in all grades was thus 5.0. However, the minimum congruence score for students in grades 3-8 was 2.0, while the minimum score for students in grades 9-11 was 1.0. It would have been possible to equate the range of congruence scores by recoding the "professional or graduate school after college" responses from parents and students to a 4.0 for 9-11 graders. However, it was felt that expectations concerning how far parents want their children to go in school are more clearly defined the older the child becomes, and that the greater range of congruence scores for older students reflected the fact that the possible range for expectations was greater for students who were in high school.

of course, a phi coefficient. So as to make maximum use of all the data that were present, each correlation was based on all students who had non-blank data for those two variables.

So that the associations between parental expectations, student perceptions and parent/student congruence, and the demographic characteristics of students (SES or SES group, sex, and ethnic group membership) could be reviewed more thoroughly, cross-tabulations between characteristics and congruence were prepared.

4. How much variation in parental expectations, student perceptions, posttest, pretest (or post-attitude and pre-attitude) and SES existed at the various levels of parent/student congruence?

In order to explore the possible impact that parent/student congruence had on school outcomes such as cognitive achievement and attitudes, it was necessary to consider the amount of variation in the key analysis variables at the various levels of parent/student congruence. Therefore, frequency distributions or means and standard deviations of the primary analysis variables were computed separately for students at different levels of parent/student congruence.

5. What was the relationship between educational expectations and cognitive achievement or attitudes?

Although it is difficult to interpret meaningfully variables that are as highly intercorrelated and confounded as those gathered in survey research of the kind discussed here, it seemed logical that the "purest" measure of the potential association between achievement (or attitudes) and expectations would be the correlation between achievement test (or attitude) scores and the students' perceptions of their parents' expectations. Assuming that the student has answered truthfully, such an answer certainly represents a measure of the expectations that are functionally present in his/her environment. Therefore, posttest achievement (or post-attitude) was regressed on pretest (or pre-attitude), SES, and student perception. By subtracting from the square of the resulting multiple correlation the square of the multiple correlation between posttest (or post-attitude) and pretest (or pre-attitude) and SES, it was possible to compute the proportion

of posttest (or post-attitude)[1] variance uniquely attributable to student perception. A uniqueness is, in fact, the square of the correlation between the posttest and that part of each student perception score that cannot be predicted from the student's pretest and SES scores. Thus, the square root of a uniqueness is also called a part correlation.

On the other hand, a partial correlation between posttest and student perception in which pretest and SES are covaried out of both variables involves a different educational and statistical model than that of the part correlation. So that crucial hypotheses could be examined from more than one methodological perspective, such partial correlations were also computed. These two somewhat different correlational measures were utilized to examine the possible impact of expectations because project staff felt that the use of two such procedures was advisable given the confounding present among the variables studied. Similarity of results would suggest that the finding was not completely method dependent.

6. Was the relationship between posttest and pretest, SES, and parental expectations similar across levels of parent/student congruence?

Regression analysis was used to determine if the regression surfaces for pretest, SES, and parental expectations were similar for different levels of parent/student congruence. Differences in regression surfaces were hypothesized on the basis of the following reasoning. Because of the manner in which congruence was measured here, where there was high parent/student congruence, parent expectations and student perceptions were similar (by definition). It seems reasonable, then, to hypothesize that if outcomes were related to parental expectations, they should be related at high congruence levels.

However, congruence could also be viewed as a measure of the extent to which parental expectations and student perceptions were confounded. For

[1]Pretest and pre-attitude measures were administered during the late winter/early spring of 1971, while the post-measures were administered during the late winter/early spring of 1972. To ease the burden on the reader (as well as the writers), whenever pretest is used in the remainder of this methods section, it refers to both pretest and pre-attitude. Similarly, posttest refers to both cognitive and attitude post-measures.

this reason, we really could not distinguish between the actual impact of the parents' expectations and the impact of the students' perceptions of those expectations where expectations and perceptions were highly confounded, i.e., for students for whom parent/student congruence was high. The low congruence students, however, provided some information on this point. If parental expectations were important, it would seem that where congruence was low, one would expect to see a smaller relationship between outcomes and parental expectations than where congruence was high.

Given that the overall test of homogeneous regression surfaces across levels of parent/student congruence suggested that the surfaces were not equal, posttest was regressed on pretest, SES, and parental expectations separately for students at each level of congruence. The correlation of posttest with that portion of the parental expectations variables that was not correlated with pretest and SES was computed. The square of this part correlation is what has been called a "uniqueness" elsewhere in this report and in previous volumes. A partial correlation between posttest and parental expectations with pretest and SES covaried out of both variables was also used to assess this association.

If regression surfaces were homogeneous, we would assume that the impact of pretest, SES, parental expectations, and parent/student congruence was additive--that is, assuming the relationships were positive, higher posttest scores would be associated with higher parental expectation and greater parent/student congruence. Lower levels of achievement growth (or attitude change) would be associated with lower parental expectations and less parent/student congruence. Partial correlations between posttest and parental expectations were also computed, covarying pretest and SES out of both variables.

7. What was the hypothesized relationship of parental expectations, student perceptions, and parent/student congruence to be considered in these analyses?

To simplify the computations and the analyses implemented for this report, it was assumed that the relationship of all predictor variables with the criterion or outcome variable was linear. Although it would have

been possible to develop and analyze a series of dummy-coded predictor variables that identified different levels of such variables as parent/student congruence (or to include squared terms in such regression analyses), time did not permit this degree of complexity in what were, by design, exploratory analyses.

## Results and Discussion

The analyses for this report were implemented on the sample of 315 Project LONGSTEP students who were present in the Verification Study and who were in grades 3 through 11 during the 1971-72 school year. Of these 315 students, approximately 91% were white and 52% were female. Some 22% were identified as having a high socioeconomic status (SES) home background, 64% as middle SES, and 14% as low SES. (An explanation of the manner in which high, medium and low SES groups were created is presented in Question 2 in the previous section.) Table 2 shows the number of students from each of the nine grade levels of students analyzed. Examination of this table indicates that almost one-half of the sample was comprised of elementary school students in grades 3 through 6. Approximately 23% of the students were of junior high school age (grades 7 and 8), while 28% were of high school age (grades 9, 10 and 11).

Findings concerning the association of educational expectations and parent/student congruence with growth in student cognitive achievement and with changes in student attitudes are summarized in the sections following this introduction. It should be noted that these sections were not designed to be exhaustive presentations of all the analyses conducted. Rather, each discussion focuses on the primary research question addressed and on the results which the authors have judged to be of crucial importance to the objectives of this particular set of analyses. (So that readers may evaluate hypotheses of their own, the means, standard deviations and intercorrelations among all key analysis variables have been placed in Appendix A, Tables A-3 and A-4.)

TABLE 2

Distribution of Students by Grade Level

| Grade in Spring 1972 | Frequency | Percentage |
|---|---|---|
| 3 | 15 | 4.8 |
| 4 | 47 | 14.9 |
| 5 | 46 | 14.6 |
| 6 | 47 | 14.9 |
| 7 | 38 | 12.1 |
| 8 | 34 | 10.8 |
| 9 | 39 | 12.4 |
| 10 | 24 | 7.6 |
| 11 | 25 | 7.9 |

Educational Expectations and Student Achievement and Attitudes

As noted in Question 5 in the Study Design and Methods section, students' perceptions of parental educational expectations logically represent the attitude environment present in their homes. Thus, if parental expectations are related to the achievement and attitudes of their children, the attitude environment as perceived by their children should be related to these outcomes. Table 3 shows the part correlation of posttest (and post-attitude) with that part of the How Far in School (student perception) variable that could not be predicted from pretest (or pre-attitude) and SES. The partial correlation of posttest (or post-attitude) and How Far in School (student perception) in which pretest (or pre-attitude) and SES have been covaried out of both posttest and How Far in School is also shown in Table 3. Similar correlations for the How Good a Student (student perception) analysis are contained in Table 4.

TABLE 3

Part and Partial Correlations
between Posttest (and Post-Attitude) and
How Far in School (Student Perception)

| | Sample Size | How Far in School (Student Perception) | |
|---|---|---|---|
| | | Part Correlation | Partial Correlation |
| Posttest | 223 | .02 | .05 |
| Post-Attitude Composite | 242 | .14* | .16** |

* $p \leq .05$

** $p \leq .01$

TABLE 4

Part and Partial Correlations
between Posttest (and Post-Attitude) and
How Good a Student (Student Perception)

| | Sample Size | How Good a Student (Student Perception) | |
|---|---|---|---|
| | | Part Correlation | Partial Correlation |
| Posttest | 222 | .04 | .10 |
| Post-Attitude Composite | 243 | .26*** | .31*** |

*** $p \leq .001$

The correlations reproduced in Tables 3 and 4 show that students' perceptions of their parents' expectations regarding How Far in School and How Good a Student were significantly related only to the Post-Attitude Composite outcome measure. These results, then, would support the view that parental expectations as perceived by the student are related to subsequent changes in school-related attitudes. They also indicate that the relationship is positive--that is, the greater the perceived parental expectation, the more positive the students' general attitudes toward school in the subsequent school year.

These findings, however, do not take into account the actual parental expectations as reported by the parent. If parent/student congruence were perfect, then the findings reported here would also be true regarding the impact of the parents' reported expectations--by definition, perfect congruence can occur only when parental expectation and student perception agree. Congruence between parent and student, however, was not perfect. In fact, the correlation between the parental expectation and student perception was only .35 (n=291) for How Far in School, and .12 (n=295) for How Good a Student. (Correlations were based on all students who had no missing data for the two variables correlated.) The next section explores more fully the possible impact of congruence and actual reported parental expectations on achievement growth and attitude change.

Parent/Student Congruence and Student Achievement and Attitudes

The previous section suggested that parental expectations as perceived by the student were positively related to changes in attitudes. Analyses described here attempted to determine if actual parental expectations (as reported by parents) and accurate communication of these expectations to the child (as measured by parent/student congruence) were related to changes in outcomes.

The most straightforward manner in which to explore the impact of parental expectation and congruence was to include these variables as predictors of posttest (or post-attitude) in a regression model also containing pretest (or pre-attitude) and SES as predictors. Such a model, however, assumes that the impact of each predictor variable is additive--that is,

it must be assumed that the impact of one predictor (like parental expectations) does not change for students at different levels of another predictor (like parent/student congruence). This assumption was tested directly since it was thought that parent/student congruence might "moderate" the impact of parental expectations on outcomes. The rationale underlying this hypothesized moderator effect is discussed next.

First, it is necessary to ascertain if the parents' wishes, correctly or incorrectly perceived by the students, are related to growth in achievement or changes in attitudes. The previous section demonstrated this relationship in the case of attitudes, but showed that parental expectation, as perceived by the student, did not seem to be related to growth in achievement. Second, it seems logical that parental expectations as reported by the parent should be related to student outcomes only if the student correctly perceives those expectations. When effective communication between parent and child exists, then parental expectation and student perception coincide, congruence is high, and changes in outcomes (at least in attitudes) should conform to that joint, congruent expectation. When communication is poor, however, parental expectation and student perception are dissimilar, congruence is low, and changes in outcomes might not necessarily conform to the parental expectation as reported by the parent.

Regression analysis showed that parent/student congruence acted as a moderator in only the attitude composite analyses. Table 5 shows the squared multiple correlation ($R^2$) between posttest (or post-attitude) and pretest (or pre-attitude), SES, parental expectation, parent/student congruence and a three-variable set of product variables representing interactions with parent/student congruence. This $R^2$ is called the "full model $R^2$." The multiple correlation squared of posttest (or post-attitude) with all predictors except the product or interaction variables is also shown. This is called the restricted model. A statistical test of the difference in these two $R^2$s tests whether or not parent/student congruence did act as a moderator in these data. Table 5 shows that the difference in $R^2$s between the full and restricted models was small. A statistically significant moderator effect was present only in the Attitude Composite analysis for How Good a Student. These findings, then, suggest that the

TABLE 5

Moderator Analysis Results

| Dependent Variable | Full Model (FM) $R^2$ | Full Model (FM) No. of Predictors | Restricted Model (RM) $R^2$ | Restricted Model (RM) No. of Predictors | No. of Students | $R^2_{FM} - R^2_{RM}$ |
|---|---|---|---|---|---|---|
| Posttest: | | | | | | |
| Parent - How Far in School | .81666 | 7 | .81531 | 4 | 208 | .001 |
| Parent - How Good a Student | .81455 | 7 | .81127 | 4 | 211 | .003 |
| Post-Attitude: | | | | | | |
| Parent - How Far in School | .34345 | 7 | .32736 | 4 | 227 | .016 |
| Parent - How Good a Student | .33205 | 7 | .29510 | 4 | 231 | .037* |

*$p \leq .05$

relationship between post-attitude and pre-attitude, SES, and How Good a Student (Parental Expectation) was not homogeneous across levels of parent/student congruence.

Table 6 shows the regression coefficients obtained when post-attitude was regressed on pre-attitude, SES, and How Good a Student (Parental Expectation) for each of the four levels of parent/student congruence. The statistical test of a regression coefficient's difference from zero is equivalent to testing the significance of the correlation of the criterion with that part of the predictor that was not correlated with the other predictors in the model--that is, this test is equivalent to a test of the part correlation in which post-attitude is related to that part of How Good a Student (Parental Expectation) that could not be predicted from pre-attitude and SES. The sign of the regression coefficient also is the sign of that particular part correlation. Table 6, then, shows that parental expectation regarding How Good a Student was (1) negatively related to attitudes for students at a low parent/student congruence level but (2) positively related to attitudes for students at a high parent/student congruence level. Parental expectation was not related to attitudes of students for whom a moderate level of parent/student congruence was present.

Table 7 shows the partial correlations between post-attitude and How Good a Student in which pre-attitude and SES have been covaried out of both criterion and predictor. Findings based on the partial correlations shown in Table 7 paralleled those discussed with respect to the regression analysis results shown in Table 6.

The moderator analyses summarized in Table 5, however, showed that parent/student congruence did not behave as a moderator variable in either of the posttest analyses or in the post-attitude analysis of How Far in School. Table 8 shows the regression coefficients for those analyses in which posttest (or post-attitude) was regressed on pretest (or pre-attitude), SES, the appropriate parental expectation and the appropriate parent/student congruence. Results presented in Table 8 show that parental expectation

TABLE 6

Regression Coefficients for the
How Good a Student (Parent Expectation) Analysis by Congruence Level -
Attitude Composite Outcome

| Level of Parent/Student Congruence | Number of Students | Multiple Correlations Squared | Standardized Regression Coefficients | | |
|---|---|---|---|---|---|
| | | | Pre-Attitude | SES | How Good a Student (Parent Expectation) |
| 1 (none) | 1 | NA | NA | NA | NA |
| 2 | 36 | .311 | .508** | -.082 | -.371* |
| 3 | 104 | .237 | .430*** | .113 | .120 |
| 4 (perfect) | 90 | .494 | .568*** | -.057 | .290*** |

NA, Not applicable because degrees of freedom were too small.

* $p \leq .05$

** $p \leq .01$

*** $p \leq .001$

NOTE: Means, standard deviations and intercorrelations by level of congruence are shown in Appendix A, Tables A-5, A-6 and A-7.

TABLE 7

Partial Correlations between Post-Attitude and How Good a Student (Parent Expectation) by Congruence Level - Attitude Composite Outcome

| Level of Parent/Student Congruence | Partial Correlation |
|---|---|
| 1 (none) | NA |
| 2 | -.386* |
| 3 | .133 |
| 4 (perfect) | .362*** |

NA, Not applicable because degrees of freedom were too small

* $p \leq .05$

*** $p \leq .001$

NOTE: Means, standard deviations and intercorrelations by level of congruence are shown in Appendix A, Tables A-5, A-6 and A-7.

TABLE 8

Regression Coefficients for the Analyses in
Which Parent/Student Congruence Moderator Effects Were Not Found

| Dependent Variable | $R^2$ | Standardized Regression Coefficients | | | |
|---|---|---|---|---|---|
| | | Pretest (or Pre-Attitude) | SES | Parental Expectation | Parent/Student Congruence |
| Posttest: | | | | | |
| Parent - How Far in School | .815 | .897*** | -.041 | .058 | .006 |
| Parent - How Good a Student | .811 | .907*** | -.025 | .002 | .042 |
| Post-Attitude: | | | | | |
| Parent - How Far in School | .327 | .505*** | -.023 | .197** | .058 |

** $p \leq .01$

*** $p \leq .001$

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accounted for a statistically significant proportion of the variance[2] in the dependent variable in only the attitude analyses for How Far in School.

Correlations of Parental Expectations and Parent/Student Congruence with SES, Ethnic Group, Sex, and Grade Level

One of the questions explored in this study was the extent to which the findings summarized previously may have been influenced by socioeconomic status, ethnic group membership, sex, or grade level. Table 9 presents the correlations of these variables with parental expectations of How Far in School and How Good a Student, the child's perceptions of these expectations, and the degree of congruence between parental expectations and student perceptions. As expected, parental expectations concerning how far in school they want their children to go, as well as the student's perceptions of these expectations, were significantly correlated with SES level. The degree of congruence between these expectations and the children's perceptions, however, was not significantly related to SES level.

Ethnic group membership (white vs. nonwhite) showed no significant relationship with either parental expectations, student perceptions, or degree of congruence. One finding of contemporary interest shown in Table 9 was the slight tendency for female students to have lower estimates than males regarding how good a student their parents wanted them to be. Lastly, student perception and grade level were significantly correlated, positively in the How Far in School analysis and negatively in the How Good a Student analysis.

Nevertheless, the confounding of SES or grade level with expectations, perceptions and congruence probably had no meaningful impact on the findings discussed earlier in this results section. This is because

- SES had been included as a control variable (i.e., as a covariate) in the part and partial correlations upon which conclusions were based; and

[2]As noted previously, the statistical significance of the regression coeffient is identical to that of the correlation between the dependent variable and that part of the predictor not correlated with the other predictors.

TABLE 9

Correlations of Parental Expectations, Student Perception, and Parent/Student Congruence with SES, Ethnic Group, Sex, and Grade Level[1]

| | How Far in School | | | How Good a Student | | |
|---|---|---|---|---|---|---|
| | Parental Expectation | Student Perception | Parent/Student Congruence | Parental Expectation | Student Perception | Parent/Student Congruence |
| SES | .41*** | .20*** | .09 | .04 | .07 | .11* |
| Ethnic Group | -.09 | -.08 | -.08 | -.07 | -.07 | .03 |
| Sex | -.04 | .04 | -.06 | .07 | -.12* | -.02 |
| Grade Level | .04 | .12* | .12* | -.08 | -.23*** | -.06 |

*$p \leq .05$

***$p \leq .001$

[1]Based on all the data available for each pair of variables. The complete correlation matrix and Ns are shown in Appendix A, Table A-4.

- The part and partial correlations discussed previously were recomputed with grade level as an additional control variable (i.e., as a covariate) and no meaningful differences in results were obtained.

## Summary and Conclusions

The results of this study suggest that perceived parental expectations concerning how far in school they want their children to go and how good a student they want their children to be, while not related to student achievement test performance the following year, are both positively related to children's attitudes toward school. The greater the perceived parental expectations, the more positive the children's attitudes toward school during the following year. It should be emphasized that these results reflect student perceptions of parental expectations and not parental expectations directly.

When we look at the actual parental expectations we again find a positive relationship between how far in school they want their children to go and student attitudes toward school during the following year. The impact of these expectations is about the same regardless of how accurately the children perceive them.

In contrast, the impact of parental expectations concerning how good a student they want their children to be varied, depending on how accurately their children perceived these expectations. Where children's perceptions and parental expectations are in close agreement, such expectations are positively related to students' attitudes toward school during the following year. The more accurately that children perceive these expectations, the more likely are high parental expectations to result in positive attitudes toward school on the part of their children. On the other hand, where there is very low agreement between parental expectations and children's perceptions of How Good a Student, our findings indicate a negative relationship between parental expectations and student school-related attitudes. In such cases the children of parents with high expectations are more likely to become less positive in their attitudes toward school.

Where there is a moderate degree of agreement (or disagreement) between parental expectations and student perceptions of these expectations, student attitudes toward school are generally not related to parental expectations regarding how good a student they want their children to be.

Agreement between parental expectations and student perceptions did not seem to have any direct impact on either student achievement or attitudes. Rather, as explained in the previous paragraph, the degree of parent/student agreement with respect to how good a student the parents' want their children to be served to moderate or qualify whether or not the parental expectations themselves had any impact. From a research standpoint, this exploratory study suggests that the amount of agreement between parental expectations and student perceptions in this area might be a worthwhile variable for future studies of school-related attitudes.

It is not known why parent/student agreement with respect to How Good a Student qualified or moderated the relationship between parental expectation and attitudes, while agreement on How Far in School did not. Children could more accurately estimate their parents' How Far in School expectations than they could their How Good in School expectations. For example, 50% of all students were able to predict perfectly their parents expectations as to How Far in School, versus 38% perfect agreement concerning How Good a Student.

In summary, based upon the findings of this exploratory study, it would appear that parental expectations concerning both how far in school they want their children to go and how good a student they want their children to be can influence student attitudes toward school; however, such expectations do not appear to influence student achievement test performance. In the case of how far in school they want their children to go, no special effort may be needed to communicate these expectations. On the other hand, it appears that parents with high expectations concerning how good a student they want their children to be would be well advised to make a special effort to communicate these expectations to their children.

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# APPENDIX A

## Supporting Tables

TABLE A-1

Means, Standard Deviations and Intercorrelations for the Scales Forming the Composite Attitude Index - Spring 1971

| Variable | N | $\bar{X}$ | SD | ATS | ATLA | RI | ATM |
|---|---|---|---|---|---|---|---|
| Attitude toward School (ATS) | 245 | 101.3 | 9.8 | --- | .41 | .35 | .32 |
| Attitude toward Language Arts (ATLA) | 244 | 99.9 | 10.2 | .41 | --- | .38 | .32 |
| Reading Interest (RI) | 245 | 99.1 | 10.2 | .35 | .38 | --- | .22 |
| Attitude toward Mathematics (ATM) | 244 | 101.0 | 10.1 | .32 | .32 | .22 | --- |

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TABLE A-2

Means, Standard Deviations and Intercorrelations for the Scales Forming the Composite Attitude Index - Spring 1972

| Variable | N | $\bar{X}$ | SD | ATS | ATLA | RI | ATM |
|---|---|---|---|---|---|---|---|
| Attitude toward School (ATS) | 313 | 100.0 | 10.9 | --- | .38 | .38 | .43 |
| Attitude toward Language Arts (ATLA) | 312 | 99.9 | 9.8 | .38 | --- | .41 | .21 |
| Reading Interest (RI) | 314 | 100.0 | 10.5 | .38 | .41 | --- | .13 |
| Attitude toward Mathematics (ATM) | 312 | 100.6 | 10.1 | .43 | .21 | .13 | --- |

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TABLE A-3

Means and Standard Deviations for
All Key Analysis Variables

| Variable[1] | Cases[2] | Mean | Standard Deviation[3] |
|---|---|---|---|
| BTOT72S | 294 | 99.9998 | 9.8626[4] |
| BTOT71S | 243 | 99.9998 | 9.8541[4] |
| COMATT72 | 314 | 100.1074 | 7.3321 |
| COMATT71 | 245 | 100.3182 | 7.1157 |
| COMPSES | 312 | 99.3225 | 9.6459 |
| SESD | 312 | 2.0769 | 0.6005 |
| SEX | 315 | 1.5238 | 0.5002 |
| ETHGRP | 315 | 1.9079 | 0.2896 |
| GRADE72 | 315 | 6.8222 | 2.3200 |
| PFAR | 293 | 3.4744 | 0.8701 |
| SFAR | 312 | 3.3878 | 0.9353 |
| CFAR | 291 | 4.3505 | 0.8057 |
| PGOOD | 296 | 3.0743 | 0.7599 |
| SGOOD | 312 | 3.3269 | 0.7537 |
| CGOOD | 295 | 3.2475 | 0.7070 |
| BTOT72 | 294 | 505.6121 | 113.3685 |
| BTOT71 | 243 | 477.0081 | 110.6411 |

[1]See Appendix A, Table A-8 for an explanation of these variable abbreviations.

[2]Numbers of students with a nonblank score.

[3]$s_x = \sqrt{\frac{\sum (X - \bar{X})^2}{N - 1}}$, where

$s_x$ = standard deviation of X,

X = raw score on X,

$\bar{X}$ = mean of X, and

N = number of nonblank scores.

[4]Both posttest and pretest were standardized to mean = 100.0 and standard deviation = 10.0 separately by grade. This slight discrepancy from 10.0 is due to rounding error.

TABLE A-4

Intercorrelations Among All
Key Analysis Variables[1,2]

[1]Table entries are the correlation coefficient, the number of cases for which there was no missing data (upon which the correlation was based), and the statistical significance (two-tailed) of the coefficient. See Appendix A, Table A-8 for an explanation of the variable abbreviations.

[2]The correlations shown may not be those used in the multiple correlations or partial correlations discussed in the report. These latter statistics were based only on those cases for whom there was no missing data on any of the variables involved.

# TABLE A-4

| | BTUT72S | BTUT71S | COMATT72 | COMATT71 | COMPSES | SESD | SEX | ETHGRP | GRADE72 | PFAR |
|---|---|---|---|---|---|---|---|---|---|---|
| BTUT72S | 1.0000<br>( 0)<br>S=0.001 | 0.6944<br>( 2427)<br>S=0.001 | 0.2556<br>( 2427)<br>S=0.001 | 0.1979<br>( 2291)<br>S=0.001 | 0.2731<br>( 2921)<br>S=0.001 | 0.2523<br>( 2921)<br>S=0.001 | 0.1046<br>( 2941)<br>S=0.073 | 0.2151<br>( 2941)<br>S=0.001 | -0.0000<br>( 2941)<br>S=1.000 | 0.3384<br>( 2731)<br>S=0.001 |
| BTUT71S | 0.6944<br>( 2427)<br>S=0.001 | 1.0000<br>( 0)<br>S=0.001 | 0.2753<br>( 2427)<br>S=0.001 | 0.2249<br>( 2301)<br>S=0.001 | 0.3712<br>( 2401)<br>S=0.001 | 0.3501<br>( 2401)<br>S=0.001 | 0.1407<br>( 2431)<br>S=0.028 | 0.2812<br>( 2431)<br>S=0.001 | 0.0000<br>( 2431)<br>S=1.000 | 0.3611<br>( 2251)<br>S=0.001 |
| COMATT72 | 0.2556<br>( 2931)<br>S=0.001 | 0.2753<br>( 2421)<br>S=0.001 | 1.0000<br>( 0)<br>S=0.001 | 0.5338<br>( 2441)<br>S=0.001 | 0.6813<br>( 3111)<br>S=0.153 | 0.6401<br>( 3111)<br>S=0.482 | 0.1480<br>( 3141)<br>S=0.009 | -0.0786<br>( 3141)<br>S=0.165 | -0.0550<br>( 3141)<br>S=0.331 | 0.7616<br>( 2931)<br>S=0.001 |
| COMATT71 | 0.1979<br>( 2291)<br>S=0.003 | 0.2249<br>( 2301)<br>S=0.001 | 0.5338<br>( 2441)<br>S=0.001 | 1.0000<br>( 0)<br>S=0.001 | 0.1095<br>( 2451)<br>S=0.087 | 0.0865<br>( 2451)<br>S=0.177 | 0.1947<br>( 2451)<br>S=0.002 | -0.0285<br>( 2451)<br>S=0.657 | -0.1280<br>( 2451)<br>S=0.045 | 0.1412<br>( 2281)<br>S=0.033 |
| COMPSES | 0.2731<br>( 2921)<br>S=0.001 | 0.3712<br>( 2401)<br>S=0.001 | 0.6813<br>( 3111)<br>S=0.153 | 0.1095<br>( 2451)<br>S=0.087 | 1.0000<br>( 0)<br>S=0.001 | 0.8745<br>( 3121)<br>S=0.001 | 0.0462<br>( 3121)<br>S=0.416 | 0.1470<br>( 3121)<br>S=0.009 | 0.0292<br>( 3121)<br>S=0.607 | 0.4079<br>( 2911)<br>S=0.001 |
| SESD | 0.2523<br>( 2921)<br>S=0.001 | 0.3501<br>( 2401)<br>S=0.001 | 0.6401<br>( 3111)<br>S=0.482 | 0.0865<br>( 2451)<br>S=0.177 | 0.8745<br>( 3121)<br>S=0.001 | 1.0000<br>( 0)<br>S=0.001 | 0.0041<br>( 3121)<br>S=0.942 | 0.1712<br>( 3121)<br>S=0.002 | 0.0488<br>( 3121)<br>S=0.390 | 0.3443<br>( 2911)<br>S=0.001 |
| SEX | 0.1046<br>( 2941)<br>S=0.073 | 0.1407<br>( 2431)<br>S=0.028 | 0.1480<br>( 3141)<br>S=0.009 | 0.1947<br>( 2451)<br>S=0.002 | 0.0462<br>( 3121)<br>S=0.416 | 0.0041<br>( 3121)<br>S=0.942 | 1.0000<br>( 0)<br>S=0.001 | -0.0178<br>( 3151)<br>S=0.753 | 0.0723<br>( 3151)<br>S=0.201 | -0.0357<br>( 2931)<br>S=0.543 |
| ETHGRP | 0.2151<br>( 2941)<br>S=0.001 | 0.2812<br>( 2431)<br>S=0.001 | -0.0786<br>( 3141)<br>S=0.165 | -0.0285<br>( 2451)<br>S=0.657 | 0.1470<br>( 3121)<br>S=0.009 | 0.1712<br>( 3121)<br>S=0.002 | -0.0178<br>( 3151)<br>S=0.753 | 1.0000<br>( 0)<br>S=0.001 | -0.1098<br>( 3151)<br>S=0.052 | -0.0898<br>( 2931)<br>S=0.125 |
| GRADE72 | -0.0000<br>( 2941)<br>S=1.000 | 0.0000<br>( 2431)<br>S=1.000 | -0.0550<br>( 3141)<br>S=0.331 | -0.1280<br>( 2451)<br>S=0.045 | 0.0292<br>( 3121)<br>S=0.607 | 0.0488<br>( 3121)<br>S=0.390 | 0.0723<br>( 3151)<br>S=0.201 | -0.1098<br>( 3151)<br>S=0.052 | 1.0000<br>( 0)<br>S=0.001 | 0.0414<br>( 2931)<br>S=0.480 |
| PFAR | 0.3384<br>( 2731)<br>S=0.001 | 0.3611<br>( 2251)<br>S=0.001 | 0.7616<br>( 2931)<br>S=0.001 | 0.1412<br>( 2281)<br>S=0.033 | 0.4079<br>( 2911)<br>S=0.001 | 0.3443<br>( 2911)<br>S=0.001 | -0.0357<br>( 2931)<br>S=0.543 | -0.0898<br>( 2931)<br>S=0.125 | 0.0414<br>( 2931)<br>S=0.480 | 1.0000<br>( 0)<br>S=0.001 |
| SFAR | 0.1798<br>( 2911)<br>S=0.002 | 0.1653<br>( 2411)<br>S=0.020 | 0.1824<br>( 3111)<br>S=0.001 | 0.0849<br>( 2431)<br>S=0.167 | 0.1985<br>( 3091)<br>S=0.001 | 0.1341<br>( 3091)<br>S=0.018 | 0.0371<br>( 3121)<br>S=0.514 | -0.0798<br>( 3121)<br>S=0.160 | 0.1150<br>( 3121)<br>S=0.042 | 0.3494<br>( 2911)<br>S=0.001 |
| CPAR | 0.0980<br>( 2711)<br>S=0.107 | 0.0194<br>( 2241)<br>S=0.775 | 0.1600<br>( 2911)<br>S=0.006 | 0.0378<br>( 2271)<br>S=0.561 | 0.0936<br>( 2891)<br>S=0.117 | 0.1012<br>( 2891)<br>S=0.086 | -0.0597<br>( 2911)<br>S=0.310 | -0.0751<br>( 2911)<br>S=0.201 | 0.1187<br>( 2911)<br>S=0.043 | 0.1986<br>( 2911)<br>S=0.001 |
| PGRAD | 0.2207<br>( 2761)<br>S=0.001 | 0.2502<br>( 2281)<br>S=0.001 | 0.1438<br>( 2961)<br>S=0.013 | 0.2004<br>( 2311)<br>S=0.002 | 0.0379<br>( 2961)<br>S=0.517 | 0.0405<br>( 2961)<br>S=0.489 | 0.0737<br>( 2961)<br>S=0.206 | -0.0748<br>( 2961)<br>S=0.199 | -0.0832<br>( 2961)<br>S=0.153 | 0.3540<br>( 2921)<br>S=0.001 |
| SGRAD | 0.0928<br>( 2911)<br>S=0.114 | 0.1074<br>( 2401)<br>S=0.097 | 0.3281<br>( 3121)<br>S=0.001 | 0.1416<br>( 2431)<br>S=0.027 | 0.0692<br>( 3091)<br>S=0.232 | 0.0522<br>( 3091)<br>S=0.573 | -0.1247<br>( 3121)<br>S=0.028 | -0.0722<br>( 3121)<br>S=0.203 | -0.2316<br>( 3121)<br>S=0.001 | 0.1917<br>( 2921)<br>S=0.001 |
| CGRAD | 0.1065<br>( 2751)<br>S=0.078 | 0.0434<br>( 2271)<br>S=0.515 | 0.0756<br>( 2951)<br>S=0.196 | 0.0261<br>( 2311)<br>S=0.693 | 0.1128<br>( 2931)<br>S=0.054 | 0.0784<br>( 2931)<br>S=0.181 | -0.0202<br>( 2951)<br>S=0.730 | 0.0316<br>( 2951)<br>S=0.580 | -0.0639<br>( 2951)<br>S=0.274 | 0.1008<br>( 2911)<br>S=0.086 |
| BTOT72 | 0.6937<br>( 2941)<br>S=0.001 | 0.6446<br>( 2271)<br>S=0.001 | 0.1605<br>( 2951)<br>S=0.006 | 0.0828<br>( 2291)<br>S=0.213 | 0.2331<br>( 2921)<br>S=0.001 | 0.2204<br>( 2921)<br>S=0.001 | 0.1388<br>( 2941)<br>S=0.017 | 0.1139<br>( 2941)<br>S=0.051 | 0.4963<br>( 2941)<br>S=0.001 | 0.2976<br>( 2731)<br>S=0.001 |
| BTOT71 | 0.6049<br>( 2271)<br>S=0.001 | 0.6421<br>( 2431)<br>S=0.001 | 0.1473<br>( 2421)<br>S=0.022 | 0.0768<br>( 2301)<br>S=0.246 | 0.2679<br>( 2401)<br>S=0.001 | 0.2923<br>( 2401)<br>S=0.001 | 0.1162<br>( 2431)<br>S=0.071 | 0.0840<br>( 2431)<br>S=0.197 | 0.7370<br>( 2431)<br>S=0.001 | 0.3241<br>( 2251)<br>S=0.001 |

TABLE A-4 (continued)

| | SPAR | CPAR | PGOOD | SGOOD | CGOOD | STOT72 | STOT71 |
|---|---|---|---|---|---|---|---|
| STOT72S | 0.1794<br>( 2911)<br>S=0.002 | 0.0980<br>( 2711)<br>S=0.107 | 0.2207<br>( 2761)<br>S=0.001 | 0.0928<br>( 2911)<br>S=0.114 | 0.1065<br>( 2751)<br>S=0.078 | 0.6937<br>( 2941)<br>S=0.001 | 0.6049<br>( 2271)<br>S=0.001 |
| STOT71S | 0.1435<br>( 2411)<br>S=0.029 | 0.0194<br>( 2241)<br>S=0.773 | 0.2502<br>( 2281)<br>S=0.001 | 0.1074<br>( 2401)<br>S=0.097 | 0.0434<br>( 2271)<br>S=0.515 | 0.6445<br>( 2271)<br>S=0.001 | 0.6421<br>( 2431)<br>S=0.001 |
| CUMAT72 | 0.1824<br>( 3111)<br>S=0.001 | 0.1600<br>( 2911)<br>S=0.006 | 0.1438<br>( 2961)<br>S=0.013 | 0.1281<br>( 3121)<br>S=0.001 | 0.0756<br>( 2951)<br>S=0.196 | 0.1605<br>( 2951)<br>S=0.006 | 0.1473<br>( 2421)<br>S=0.022 |
| CUMAT71 | 0.0864<br>( 2431)<br>S=0.167 | 0.0388<br>( 2271)<br>S=0.561 | 0.2004<br>( 2331)<br>S=0.002 | 0.1416<br>( 2431)<br>S=0.027 | 0.0261<br>( 2311)<br>S=0.693 | 0.0828<br>( 2281)<br>S=0.213 | 0.0768<br>( 2301)<br>S=0.246 |
| CUMPSES | 0.1985<br>( 3091)<br>S=0.001 | 0.0936<br>( 2891)<br>S=0.117 | 0.0579<br>( 2941)<br>S=0.517 | 0.0487<br>( 3041)<br>S=0.232 | 0.1128<br>( 2931)<br>S=0.054 | 0.2331<br>( 2921)<br>S=0.001 | 0.2[illegible]<br>( 2401)<br>S=0.001 |
| SESU | 0.1341<br>( 3091)<br>S=0.018 | 0.1012<br>( 2891)<br>S=0.086 | 0.0485<br>( 2961)<br>S=0.489 | 0.0322<br>( 3091)<br>S=0.573 | 0.0784<br>( 2931)<br>S=0.181 | 0.2204<br>( 2921)<br>S=0.001 | 0.2923<br>( 2401)<br>S=0.001 |
| SLA | 0.0374<br>( 3141)<br>S=0.514 | -0.0597<br>( 2941)<br>S=0.310 | 0.0737<br>( 2981)<br>S=0.206 | -0.1247<br>( 3121)<br>S=0.028 | -0.0202<br>( 2951)<br>S=0.730 | 0.1388<br>( 2941)<br>S=0.017 | 0.1162<br>( 2431)<br>S=0.071 |
| ETHGRP | -0.0798<br>( 3121)<br>S=0.160 | -0.0751<br>( 2911)<br>S=0.201 | -0.0748<br>( 2961)<br>S=0.199 | -0.0722<br>( 3121)<br>S=0.203 | 0.0316<br>( 2951)<br>S=0.589 | 0.11[illegible]<br>( 29[illegible]<br>S=0.05[illegible] | 0.0846<br>( 2431)<br>S=0.192 |
| GRADE72 | 0.1150<br>( 3121)<br>S=0.042 | 0.1187<br>( 2911)<br>S=0.043 | -0.0832<br>( 2961)<br>S=0.153 | -0.2316<br>( 3121)<br>S=0.001 | -0.0639<br>( 2951)<br>S=0.274 | 0.6943<br>( 2941)<br>S=0.001 | 0.7370<br>( 2431)<br>S=0.001 |
| PPAA | 0.3644<br>( 2911)<br>S=0.001 | 0.1986<br>( 2911)<br>S=0.001 | 0.3540<br>( 2921)<br>S=0.001 | 0.1917<br>( 2921)<br>S=0.001 | 0.1008<br>( 2911)<br>S=0.084 | 0.2974<br>( 2731)<br>S=0.001 | 0.3241<br>( 2251)<br>S=0.001 |
| SPAR | 1.0000<br>( 0)<br>S=0.001 | 0.3058<br>( 2911)<br>S=0.001 | 0.0370<br>( 2961)<br>S=0.527 | 0.1657<br>( 3101)<br>S=0.003 | 0.0480<br>( 2931)<br>S=0.246 | 0.2215<br>( 2911)<br>S=0.001 | 0.2431<br>( 2411)<br>S=0.001 |
| CPAR | 0.3058<br>( 2911)<br>S=0.001 | 1.0000<br>( 0)<br>S=0.001 | 0.0619<br>( 2901)<br>S=0.293 | 0.0706<br>( 2901)<br>S=0.727 | -0.0210<br>( 2891)<br>S=0.722 | 0.1413<br>( 2711)<br>S=0.020 | 0.0823<br>( 2241)<br>S=0.220 |
| PGOOD | 0.0370<br>( 2961)<br>S=0.527 | 0.0619<br>( 2901)<br>S=0.293 | 1.0000<br>( 0)<br>S=0.001 | 0.1225<br>( 2951)<br>S=0.036 | 0.3952<br>( 2951)<br>S=0.001 | 0.1285<br>( 2761)<br>S=0.033 | 0.1520<br>( 2281)<br>S=0.022 |
| SGOOD | 0.1657<br>( 3101)<br>S=0.003 | 0.0706<br>( 2901)<br>S=0.727 | 0.1225<br>( 2951)<br>S=0.036 | 1.0000<br>( 0)<br>S=0.001 | 0.1076<br>( 2951)<br>S=0.065 | -0.0839<br>( 2911)<br>S=0.153 | -0.0659<br>( 2401)<br>S=0.309 |
| CGOOD | 0.0480<br>( 2931)<br>S=0.246 | -0.0210<br>( 2891)<br>S=0.722 | 0.3952<br>( 2951)<br>S=0.001 | 0.1076<br>( 2951)<br>S=0.065 | 1.0000<br>( 0)<br>S=0.001 | 0.0280<br>( 2751)<br>S=0.644 | 0.0554<br>( 2271)<br>S=0.406 |
| STOT72 | 0.2215<br>( 2911)<br>S=0.001 | 0.1413<br>( 2711)<br>S=0.020 | 0.1285<br>( 2761)<br>S=0.033 | -0.0839<br>( 2911)<br>S=0.153 | 0.0280<br>( 2751)<br>S=0.644 | 1.0000<br>( 0)<br>S=0.001 | 0.9567<br>( 2271)<br>S=0.001 |
| STOT71 | 0.2431<br>( 2411)<br>S=0.001 | 0.0823<br>( 2241)<br>S=0.220 | 0.1520<br>( 2281)<br>S=0.022 | -0.0659<br>( 2401)<br>S=0.309 | 0.0554<br>( 2271)<br>S=0.406 | 0.9567<br>( 2271)<br>S=0.001 | 1.0000<br>( 0)<br>S=0.001 |

TABLE A-5

Means, Standard Deviations and Intercorrelations
for the Attitude Composite Analysis of How Good a Student -
Congruence Level 2 (Low)

| Variable | N | $\bar{X}$ | SD | Post-Attitude | Pre-Attitude | SES | How Good | Grade Level |
|---|---|---|---|---|---|---|---|---|
| Post-Attitude | 36 | 97.8 | .4 | --- | .43 | .09 | -.26 | -.07 |
| Pre-Attitude | 36 | 99.4 | 6.8 | .43 | --- | .14 | .17 | -.08 |
| SES | 36 | 94.7 | 9.5 | .09 | .14 | --- | -.28 | .02 |
| How Good a Student--Parent Expectation | 36 | 2.6 | 1.0 | -.26 | .17 | -.28 | --- | .02 |
| Grade Level | 36 | 7.2 | 2.4 | -.07 | -.08 | .02 | .02 | --- |

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TABLE A-6

Means, Standard Deviations and Intercorrelations
for the Attitude Composite Analysis of How Good a Student -
Congruence Level 3 (Medium)

| Variable | N | $\bar{X}$ | SD | Post-Attitude | Pre-Attitude | SES | How Good | Grade Level |
|---|---|---|---|---|---|---|---|---|
| Post-Attitude | 104 | 100.6 | 7.6 | --- | .46 | .14 | .21 | .00 |
| Pre-Attitude | 104 | 100.7 | 6.8 | .46 | --- | .04 | .18 | -.17 |
| SES | 104 | 99.5 | 9.8 | .14 | .04 | --- | .10 | -.02 |
| How Good a Student--Parent Expectation | 104 | 2.9 | 0.7 | .21 | .18 | .10 | --- | -.12 |
| Grade Level | 104 | 6.8 | 2.2 | .00 | -.17 | -.02 | -.12 | --- |

TABLE A-7

Means, Standard Deviations and Intercorrelations
for the Attitude Composite Analysis of How Good a Student -
Congruence Level 4 (Perfect)

| Variable | N | $\bar{X}$ | SD | Post-Attitude | Pre Attitude | SES | How Good | Grade Level |
|---|---|---|---|---|---|---|---|---|
| Post-Attitude | 90 | 100.4 | 7.4 | --- | .64 | .08 | .46 | -.08 |
| Pre-Attitude | 90 | 100.2 | 7.2 | .64 | --- | .20 | .30 | -.03 |
| SES | 90 | 99.5 | 9.1 | .08 | .20 | --- | .08 | .20 |
| How Good a Student--Parent Expectation | 90 | 3.4 | 0.6 | .46 | .30 | .08 | --- | -.16 |
| Grade Level | 90 | 7.2 | 2.3 | -.08 | -.03 | .20 | -.16 | --- |

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TABLE A-8

Glossary of Variable Names
and Variable Abbreviations

| Variable Abbreviations | Variable Name |
|---|---|
| BTOT72S | CTBS Battery Total Posttest - Standardized |
| BTOT71S | CTBS Battery Total Pretest - Standaridized |
| COMATT72 | Composite Attitude - Spring 1972 |
| COMATT71 | Composite Attitude - Spring 1971 |
| COMPSES | Composite Socioeconomic Status |
| SESD | SES Group |
| SEX | Sex |
| ETHGRP | Ethnic Group |
| GRADE72 | Grade Level in 1971-72 School Year |
| PFAR | Parent Expectation - How Far in School |
| SFAR | Student Perception - How Far in School |
| CFAR | Congruence - How Far in School |
| PGOOD | Parent Expectation - How Good a Student |
| SGOOD | Student Perception - How Good a Student |
| CGOOD | Congruence - How Good a Student |
| BTOT72 | CTBS Battery Total Posttest |
| BTOT71 | CTBS Battery Total Pretest |

NOTE: The manner in which these variables were scaled is shown in the text in Table 1.